Paper No. 39

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Ex parte STEPHEN J. GERTNER, JR.

Appeal No. 2001-2183
Application 08/621,215[1]

HEARD: January 16, 2003

Before BARRETT, DIXON, and BLANKENSHIP, Administrative Patent Judges.

BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the final rejection of claims 1-10 and 12-38. Claims 11 and 39 have been canceled; thus, the references to these claims in the rejections in the examiner's answer have been omitted.

[1] Application for patent filed March 25, 1996, entitled "Angled Port Loudspeaker," which is a file-wrapper-continuation of Application 08/422,779, filed April 17, 1995, now abandoned, which is a file-wrapper-continuation of Application 08/063,136, filed May 17, 1993, now abandoned.

We affirm-in-part.

BACKGROUND

The invention relates to a loudspeaker having an angled port which enhances clarity and provides improved response.

Claim 1 is reproduced below.

> 1. A loudspeaker comprising: an enclosure including a bottom wall, a front wall extending upwardly from the bottom wall, and a rear wall extending upwardly from the bottom wall and opposite the front wall and having an angled wall portion facing generally upwardly and rearwardly; at least one speaker mounted on the front wall in a given plane to direct sound waves outwardly therefrom; and at least one passive device disposed on the angled wall portion to direct sound waves produced within the enclosure outwardly in a direction generally normal to the face of the angled wall portion, the at least one passive device extending into the interior of the enclosure along a predetermined axis with respect to the at least one speaker, the predetermined axis being selected to effect selective tuning of undamped sound waves emanating directly from the at least one speaker.

The examiner relies on the following references:[2]

Mae et al. (Mae)	4,146,111	March 27, 1979
Veranth	4,146,744	March 27, 1979
Furukawa	5,173,575	December 22, 1992
Sakai	JA 59-94992	May 31, 1984
Nagai et al. (Nagai)	JA 5-199581	August 6, 1993

[2] The examiner's answer also lists Martin, U.S. Patent 2,801,704, issued August 6, 1957, as part of the prior art relied upon in the rejection of the claims on appeal. However, Martin is not referred to in either the final rejection or the examiner's answer and will not be discussed.

Claims 22, 23, 26, 27, 30, 34, and 36 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which appellants regard as their invention.

Claims 1-10, 12-22, 25, 26, 29, 32, 33[3], 37, and 38 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Mae.

Claims 1, 16, 23, 27, and 30-38 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Nagai.[4]

Claims 16, 27, and 34 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Furukawa.[5]

Claims 4-8, 24, 28, 31, and 35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mae and Veranth.

Claims 23 and 27 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Mae and Sakai.

We refer to the final rejection (Paper No. 23) (pages referred to as "FR__") and the examiner's answer (Paper No. 33)

---

[3] Claim 33 is not listed in the final rejection.

[4] Since the present application is entitled to benefit of the May 17, 1993, filing date of its grandparent Application 08/063,136, see footnote 1, and since Nagai was published on August 6, 1993, Nagai is not prior art.

[5] Since the present application is entitled to benefit of the May 17, 1993, filing date of its grandparent Application 08/063,136, see footnote 1, and since Furukawa was issued on December 22, 1992, less than one year before the filing date of the '136 application, the rejection should be under 35 U.S.C. § 102(e), not § 102(b).

(pages referred to as "EA__"[6]) for a statement of the examiner's rejection, and to the brief (Paper No. 31) (pages referred to as "Br__") and reply brief (Paper No. 35) (pages referred to as "RBr__") for a statement of appellant's arguments thereagainst.

OPINION

Indefiniteness

The examiner concludes that the limitations that "the angled wall portion is not contained within the enclosure" in claims 22, 26, and 36 and that "the angled wall portion defines an exterior part of the enclosure" in claims 23, 27, 30, and 34 are indefinite because "the angled wall portion forms the boundary of the enclosure" (FR2).

Appellant argues that the limitations are fully supported and readily understandable from the specification (Br13; Br16). It is argued that the angled wall portion 11 clearly defines an exterior part of the enclosure 10 and is not contained within the enclosure (Br14-16; RBr2-7).

We agree with appellant. Appellant's enclosure 10 is defined by the exterior walls 10a-10f and 11 in Fig. 7. The angled wall portion 11 is clearly an exterior part of the enclosure and is not within the enclosure. One of ordinary skill

[6] The pages of the examiner's answer are not actually numbered.

in the art would know what is covered by the claims and therefore the claims are not indefinite or misdescriptive.

It is not clear what problem the examiner sees with the claim language. We can only guess from the mention of the word "periphery" that the problem has something to do with the wall thickness; e.g., since the wall is within the periphery (the outermost boundary) of the enclosure it is within the enclosure. However, the claims do not recite that "the angled wall is not contained within the periphery." Since the walls (of whatever thickness) define an exterior part of the enclosure, they are not within the enclosure. The examiner has failed to establish a prima facie case of indefiniteness. The rejection of claims 22, 23, 26, 27, 30, 34, and 36 under 35 U.S.C. § 112, second paragraph, is reversed.

Anticipation over Nagai

Although not argued by appellant, we note that Nagai is not prior art. The present application is a file-wrapper-continuation of Application 08/422,779, filed April 17, 1995, now abandoned, which is a file-wrapper-continuation of Application 08/063,136 ('136 application), filed May 17, 1993, now abandoned, and is entitled to the benefit of the filing date of the '136 application. Nagai was published August 6, 1993, after the filing date of the '136 application, and, therefore, is not prior

art. Accordingly, the anticipation rejection of claims 1, 16, 23, 27, and 30-38 over Nagai is reversed pro forma.

Anticipation over Mae

Note regarding claims 23 and 36

It is noted that claim 38 depends on claim 37 which depends on claim 36 which depends on claim 23 which depends on claim 1. While claims 37 and 38 have been rejected as anticipated by Mae, claims 23 and 36 have not. It is technically improper to reject a dependent claim over prior art without rejecting the claims from which it depends since a dependent claim incorporates by reference the limitations of the claim from which it depends. However, it may be possible to sustain the rejection of claims 37 and 38 if Mae contains the limitations of claims 23 and 36 even though claims 23 and 36 have not been formally rejected. In the interest of completely addressing the patentability issues which exist in the case, we consider claims 23 and 36 to be also rejected as anticipated by Mae.

Claims 1-4, 9, 10, 12, 15, and 25

The examiner reads the "enclosure" on the rectangular structure shown in Fig. 2A, where the "front wall" reads on baffle plate 1, the "bottom wall" reads on the lower wall covered by sound absorbing material 7, the "rear wall" reads on rear plate 5, the "angled wall portion" reads on the dividing plate 6, the "speaker" on the speaker 2, and the "passive device" on the passive diaphragm 3 (FR3). Thus, under the examiner's claim

reading, the "enclosure" is more than just the upper part of the speaker cabinet above the plate 6 which contains the speaker 2.

The examiner finds that "Appellant argues on pages 16-21 that the angled wall portion of Mae does not face upwardly and rearwardly, but rather faces downwardly and rearwardly" (EA11). The examiner finds that the dividing plate 6 in Fig. 2A of Mae faces upwardly and rearwardly (EA11).

Contrary to the examiner's statement, appellant does not argue the limitation of "an angled wall portion facing generally upwardly and rearwardly" and, so, has not shown error in the examiner's position. See 37 CFR § 1.192(c)(8)(iii) (1995) (arguments must specify errors in the rejection). Nevertheless, because claim 1 does not say which side of the dividing plate 6 (inside or outside) faces upwardly and rearwardly, and does not otherwise distinguish over the orientation in Fig. 2 (e.g., it does not state that the direction of the predetermined axis is toward the speaker), the examiner's finding is not erroneous.

Appellant argues that the base portion of the enclosure in Mae does not allow sound waves from the passive device 3 to be directed "outwardly in a direction generally normal to the face of the angled wall portion," as recited in claim 1 (Br19-20; RBr8-9). It is argued that the sound waves are directed toward the base of the enclosure and are directed to exit the enclosure

through openings in directions other than normal to the face of wall 6 (Br20-21; RBr8-9).

The examiner states that "sound waves produced within the enclosure (the sound waves within the enclosure before exiting the passive device) must first exit through the passive device and some of these sound waves passing through the passive device (3) are directed outwardly in a direction normal to the angled wall portion" (EA11-12).

Claim 1 recites "at least one passive device disposed on the angled wall portion to direct sound waves produced within the enclosure outwardly [from the enclosure] in a direction generally normal to the face of the angled wall portion," where we interpret the limitation in brackets to be implicit. This limitation requires the sound waves to exit from the enclosure normal to the angled plate, not to exit from the top cavity of the enclosure normal to the angle plate as the examiner states. The examiner finds the "enclosure" to be the whole rectangular structure in Fig. 2A (FR3). The examiner cannot redefine the "enclosure" to be the structure enclosing the cavity containing the speaker 2 in Fig. 2A, as suggested by the rejection, because this enclosure does not have a bottom wall and an angled wall. Sound waves produced within the enclosure (as defined by the examiner) are directed outwardly normal to the face of the angled wall 6, but are <u>not</u> directed outwardly <u>from the enclosure</u> normal

to the face of the angled wall portion 6 because they are directed through openings in the front, rear, and side walls.

However, claim 1 is directed to a structure which reads on the structure of Mae. The limitation "upwardly and rearwardly," which defines the orientation of the structure, is considered a statement of intended use which does not change the structure. See In re Schreiber, 128 F.3d 1473, 1477, 44 USPQ2d 1429, 1431 (Fed. Cir. 1997) ("It is well settled that the recitation of a new intended use for an old product does not make a claim to that old product patentable."). Note that the environment and operation of the loudspeaker is not defined by claim 1, so the fact that the sound may be different cannot be relied on to structurally distinguish over Mae. The structure in Fig. 4 of Mae could be turned upside down, as shown on the next page, and the plate 6 would be directed "upwardly and rearwardly" without changing the structure. The structure in Fig. 4 of Mae is not different just because it is used upside down (or oriented in another direction) because the principle of operation is the same. Cf. In re Gordon, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984) (in an obviousness rejection, if prior art filter were turned upside down it would be rendered inoperable for its intended purpose).

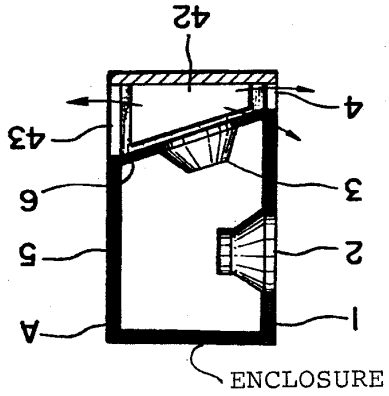

Fig. 4

Fig. 4 of Mae with interpretation of "enclosure"

Considering the speaker of Fig. 4 in an upside down orientation, as shown above, we interpret the "enclosure" in Mae to be the volume containing the speaker and enclosed by the walls of the cabinet A and the dividing plate 6 shown by the solid black line. Claim 1 is an open-ended claim which does not preclude the existence of other structure in addition to the "enclosure"; i.e., it does not preclude the presence of the structure above the dividing plate 6 shown above. Under this reading of claim 1 onto Mae, the sound waves exit from the enclosure (as defined) normal to the angled plate 6. Claim 1 says nothing about what happens after the sound leaves the enclosure: it does not say it cannot be directed to a plate as in Mae and does not claim the surrounding environment in which the speaker is located.

Appellant further argues that Mae does not teach "the at least one passive device extending into the interior of the enclosure along a predetermined axis with respect to the at least one speaker, the predetermined axis being selected to effect selective tuning of undamped sound waves emanating directly from the at least one speaker" in claim 1 (Br21) and a nearly identical limitation in claim 16 (Br21-23; RBr9-19). The examiner finds the relationship to be inherent (FR9; EA12). Appellant argues, in connection with claim 16, that this feature is not necessarily present in Mae (Br22-23). It is argued that weight must be given to appellant's recognition of a problem, even though the solution may, in hindsight, seemingly appear obvious and that Mae does not address the problem of conventional loudspeakers being unable to achieve correct phase properties (Br23-25).

Mae teaches "the at least one passive device extending into the interior of the enclosure along a predetermined axis with respect to the at least one speaker" because the passive diaphragm 3 extends into the "enclosure," as we have defined it. The question is what to do with the somewhat unusual limitation "the predetermined axis being selected to effect selective tuning of undamped sound waves emanating directly from the at least one

speaker." We interpret the phrase "being selected" to signal a process of making limitation, i.e., how the predetermined axis in the product is selected. The patentability of product-by-process claims is based on the product itself. See In re Thorpe, 777 F.2d 695, 697, 227 USPQ 964, 966 (Fed. Cir. 1985). Where the end products are the same, the process of making limitations do not have to be given weight in ex parte examination. See Atlantic Thermoplastics Co. v. Faytex Corp., 970 F.2d 834, 846, 23 USPQ2d 1481, 1490-91 (Fed. Cir. 1992) (product-by-process claims are treated differently for patentability purposes during ex parte examination in the USPTO than for infringement and validity purposes during litigation). However, a process limitation must be given weight to the extent it produces a different structure. Thus, we examine if the claimed product is different from the product in Mae.

The limitation "the predetermined axis being selected to effect selective tuning of undamped sound waves emanating directly from the at least one speaker," merely implies that the structure produced by selection of the predetermined axis affects tuning of the sound waves from the speaker. Since "selective tuning" reads on any tuning whether good or bad, as admitted by counsel at the oral hearing, any placement of the predetermined axis of the passive device will inherently effect "selective tuning" of the speaker 2 even though selective tuning is not

discussed. The limitation is so broad that it does not limit the structure. Thus, the limitation "the predetermined axis being selected to effect selective tuning of undamped sound waves emanating directly from the at least one speaker" in claims 1 and 16 does not structurally define over Mae.

For the reasons stated above, the anticipation rejection of claim 1 over Mae is sustained. The patentability of dependent claims 2-4, 9, 10, 12, 15, and 25 has not been separately argued, so the rejection of these claims is also sustained.

Claims 16, 18, 21, and 29

Claim 16 does not include the limitation of "at least one passive device disposed on the angled wall portion to direct sound waves produced within the enclosure outwardly [from the enclosure] in a direction generally normal to the face of the angled wall portion" as in claim 1. Accordingly, either the examiner's interpretation of the "enclosure" as reading on Fig. 2A or our interpretation of the "enclosure" as reading on Fig. 4 when viewed upside down is acceptable.

Appellant argues that Mae does not teach "the predetermined axis being selected to effect selective tuning of undamped sound waves emanating directly from the at least one speaker" in claim 16 (Br21-26). We disagree for the reasons stated in the analysis of claim 1 which contains the same limitation. The

anticipation rejection of claim 16 over Mae is sustained. The patentability of dependent claims 18, 21, and 29 has not been separately argued, so the rejection of these claims is also sustained.

Claim 5

Appellant argues that Mae's passive device is a conical diaphragm and is not an open tube (Br26).

The examiner finds that the conical diaphragm is an open tube (EA12).

We disagree with the examiner. A diaphragm covers the opening. A diaphragm is not "open" or a "tube." The rejection of claim 5, and its dependent claims 6-8, over Mae is reversed.

Claims 6, 7, 13, 14, 19, and 20

The rejection of claims 6 and 7 was reversed in the previous section because the rejection of claim 5 from which they depend was reversed. Nevertheless, we address these claims because of the later rejection over Mae and Veranth.

Appellant argues that Mae does not disclose the predetermined axis directed toward an edge or a central portion of the speaker or disclose any benefit from extending the passive device along a predetermined axis toward or away from any portion of the speaker (Br27-28). It is argued that while Fig. 4 shows the passive device directed at the speaker, the inability to emit

waves free of obstruction and standing waves will result in sound returning to the speaker as added distortion (Br27).

We do not find where the examiner addresses these arguments. Under the examiner's reading of the claimed "enclosure" on the whole rectangular structure in Fig. 2A of Mae, so that the dividing plate 6 is "facing generally upwardly and rearwardly," it is clear that Fig. 2A does not show the axis of the passive diaphragm 3 directed "toward" the speaker 2. However, under our interpretation of the claimed loudspeaker as reading on the loudspeaker in Fig. 4 when viewed upside down, the passive device 3 is directed toward the central portion of the speaker 2, as recited in claims 7, 14, and 20. The claims do not preclude the presence of additional structure, nor do they recite the function of the speaker, so the argument about the structure of Fig. 4 being unable to emit waves free of obstruction and standing waves is not commensurate in scope with the claims. The anticipation rejection of claims 14 and 20 is sustained.

None of the figures of Mae show the axis of the passive diaphragm 3 extending toward an edge of the speaker as recited in claims 6, 13, and 19. Accordingly, the anticipation rejection of claims 13 and 19 is reversed. The anticipation rejection of claim 6 is reversed for this additional reason.

Claims 17, 32, 33, and 38

Appellant argues that Mae does not teach selection of the predetermined axis to the angle of the wall to reduce the formation of standing waves behind the rear wall of the enclosure (Br28-29). It is argued that the angled wall portion 6 in Mae can, at most, reduce standing waves internally (Br28).

We do not find where the examiner addresses these arguments.

The "is selected" limitation in claims 17, 32, and 38 is like the "being selected" limitation in claims 1 and 16: a process-type limitation in an apparatus claim. Again, we examine if the claimed product is different from the product in Mae. The problem with the limitation is that standing waves are affected by environmental factors, such as how close the rear wall of the speaker is to the room wall and what material the room wall is made from (e.g., a soft material such as curtains will act differently from wood), which are not part of the claim. Thus, the limitation is not a property of just the speaker itself (or, at least, appellant has not shown how it is). It appears that the angle of the axis of the passive diaphragm 3 to the front wall in Mae is inherently capable of reducing standing waves behind the rear wall of the enclosure depending on the loudspeaker's placement in the environment. For this reason, we sustain the rejection of claims 17, 32, and 38. Mae appears to show an angle of about 60 degrees between the angled wall portion and the front wall of the enclosure, which anticipates claim 33;

in addition, the angle in claims 2 and 33 is not argued. The rejection of claim 33 is sustained.

Claims 22 and 26 [and 23, 27, and 36]

As previously noted, claims 23 and 36 are considered to be rejected as anticipated by Mae for the purpose of considering the rejection of claims 37 and 38. These claims are best considered in this section. Claims 22, 26, and 36 recite that "the angled wall portion is not contained within the enclosure." Claims 23 and 27 recite that "the angled wall portion defines an exterior part of the enclosure." Although claim 27 is not included in the statement of the rejection, we address it to show that claim 23 is anticipated by Mae. The examiner finds that claims 22 and 26 are anticipated because "the angled wall portion (6) of Mae et al. forms a boundary of the enclosure" (FR5).

Appellant argues that Mae does not disclose that the angled wall portion is not contained within the enclosure (Br29) and the wall does not form a boundary of the enclosure A because it is disposed entirely inside of the enclosure (Br29-30).

Under the examiner's reading of the claimed "enclosure" on the whole rectangular structure in Fig. 2A of Mae, it is clear that the dividing plate 6 is within the enclosure, contrary to claims 22, 26, and 36, and is not an exterior part of the enclosure as recited in claims 23 and 27. However, under our

interpretation of the claimed loudspeaker as reading on the loudspeaker in Fig. 4 when viewed upside down, where the "enclosure" is the cavity having the speaker 2 on one wall and the passive diaphragm 3 on the dividing plate 6, the dividing plate 6 (the angled wall portion) is not contained within the enclosure (as defined) and defines an exterior part of the enclosure (as defined). The fact that there is other structure in addition to the enclosure is not precluded by the claim language. Accordingly, the anticipation rejection of claims 22, 23, 26, and 36 is sustained.

Anticipation over Furukawa

Appellant's briefs argue only that Furukawa does not disclose that the passive device 8 extends along a predetermined axis which is selected to effect selective tuning of undamped sound waves emanating directly from the speaker (Br33; RBr9-10). Arguments not made in the briefs are waived. See 37 CFR § 1.192(c)(8)(iii) (arguments must specify errors in the rejection) and § 1.192(a) (any arguments or authorities not included in the brief will be refused consideration unless good cause is shown). Cf. In re Baxter Travenol Labs., 952 F.2d 388, 391, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991) ("It is not the function of this court to examine the claims in greater detail than argued by an appellant, looking for nonobvious distinctions

over the prior art."). In particular, we decline to address new arguments about other perceived differences which counsel attempted to introduce at the oral hearing. The purpose of the oral hearing is to emphasize facts and arguments in the briefs, not to raise new arguments to which the examiner has not had an opportunity to respond. See Manual of Patent Examining Procedure § 1206 (8th ed. Aug. 2001) (citing In re Chiddix, 209 USPQ 78 (Comm'r Pat. 1980)).

For the reasons discussed in connection with the anticipation rejection of claims 1 and 16 over Mae, the limitation "the predetermined axis being selected to effect selective tuning of undamped sound waves emanating directly from the at least one speaker" is a process limitation which does not structurally define the product over the structure in Furukawa. The anticipation rejection of claims 16, 27, and 34 over Furukawa is sustained.

Obviousness over Mae and Veranth

Claims 4, 5, 8, 24, 28, 31, and 35

The examiner concludes that it would have been obvious to replace the passive diaphragm of Mae with an open tube passive device as taught by Veranth since it is merely the replacement of one well-known passive device for another (FR6-7).

It is argued that Veranth does not cure the deficiencies of Mae with respect to the limitation of a passive device disposed on an angled wall portion to direct sound waves produced within the enclosure outwardly in a direction generally normal to the face of the angled wall portion, as recited in claim 1, or that the predetermined axis of the passive device is selected to effect selective tuning of undamped sound waves emanating directly from the speaker, as required by claim 16 (Br35-36).

We find that Mae teaches the argued limitations as discussed in the analysis of claims 1 and 16. Appellant does not argue the nonobviousness of substituting an open tube port for the passive radiator of Mae or of the open tube "terminating substantially flush with the angled wall portion," as recited in claims 31 and 35. Veranth discloses that the open port tube 74 in Fig. 9 can be replaced with a drone cone (passive radiator) 74' in Fig. 10 (col. 6, lines 37-42). Accordingly, we agree that it would have been obvious to replace the passive diaphragm 3 of Mae with an open tube port as taught by Veranth as recited in claims 4, 5, 24, 28, 31, and 35. Claim 8 has not been argued either under the anticipation rejection over Mae or this obviousness rejection and, therefore, the patentability of claim 8 falls with claim 5. The rejection of claims 4, 5, 8, 24, 28, 31, and 35 is sustained.

Claims 6 and 7

For the reasons discussed in the analysis of the anticipation rejection of claims 6, 7, 13, 14, 19 and 20 over Mae, we find that Mae does not teach the passive device directed toward an edge of the speaker as recited in claim 6, but does teach the passive device directed toward a central portion of the speaker as recited in claim 7. Veranth does not cure the deficiency of Mae with respect to claim 6. The rejection of claim 6 is reversed and the rejection of claim 7 is sustained.

Obviousness over Mae and Sakai

Claims 22?, 23, 26?, and 27

The examiner finds that Mae fails to disclose that the angled wall portion is not contained within the disclosure (FR7; EA10). The examiner finds that Sakai discloses an enclosure with angled wall portions to suppress standing waves wherein the angled wall portion is not contained within the enclosure (FR7; EA10). The examiner concludes that it would have been obvious to replace the enclosure with the angled wall portion in Mae with the enclosure with angled walls in Sakai since they are functionally equivalent (FR7-8; EA10).

Appellant argues that it appears the examiner intended to group claims 22 and 26, not claims 23 and 27, in this rejection since claims 22 and 26 require that the angled wall portion is not contained within the enclosure (Br36). Nevertheless, it is

argued, the combined teachings of Mae and Sakai do not disclose or suggest the structure of the loudspeaker recited in claims 23, 23, 26, and 27 (Br36).

The examiner's wording of the rejection is inconsistent with the claims. Claims 22 and 26 recite that the angled wall portion is not contained within the disclosure and the examiner finds that "Mae et al. fails to disclose that the angled wall portion is not contained within the enclosure" (FR7; EA10), which parallels the language of claims 22 and 26. However, the limitation of "the angled wall portion is not contained within the enclosure" in claims 22 and 26, and the limitation of "the angled wall portion defines an exterior of the enclosure" in claims 23 and 27 are closely related. Thus, we consider claims 22, 23, 26 and 27.

Appellant argues that even if the references were modified in the manner proposed by the examiner, the modified loudspeaker would not meet the terms of the claims because claims 22 and 26 relate to the reduction of standing waves and sound deterioration around the exterior positions of the enclosure, which is different from suppressing standing waves within the enclosure, as taught by Sakai (Br38).

For the reasons stated in the analysis of the anticipation rejection of claims 22 and 26 [and 23, 27, and 36] over Mae, we find that the limitations of claims 22, 23, 26, and 27 are

anticipated by Mae when claims 1 and 16 are read on the loudspeaker in Fig. 4 when viewed upside down, where the "enclosure" is the cavity having the speaker 2 on one wall and the passive diaphragm 3 on the dividing plate 6. The dividing plate 6 (the angled wall portion) is not contained within the enclosure (as defined) and defines an exterior part of the enclosure (as defined). The fact that there is other structure in addition to the enclosure is not precluded by the claim language. Since the limitations of claims 22, 23, 26, and 27 are anticipated by Mae, the obviousness rejection of claims 22, 23, 26, and 27 over Mae and Sakai is sustained.

CONCLUSION

The rejection of claims 22, 23, 26, 27, 30, 34, and 36 under 35 U.S.C. § 112, second paragraph, is reversed.

The rejection of claims 1, 16, 23, 27, and 30-38 under § 102(b) over Nagai is reversed pro forma because Nagai is not prior art.

The rejection of claims 1-4, 9, 10, 12, 14-18, 20-23, 25, 26, 29, 32, 33, and 36-38 under § 102(b) over Mae is sustained and the rejection of claims 5-8, 13, and 19 under § 102(b) over Mae is reversed.[7]

[7] As stated in the "Note regarding claims 23 and 36" on page 6 of this opinion and the subsection "Claims 22 and 26 [and 23, 27, and 36] on pages 17-18 of this opinion, claims 23 and 36 have been included in the rejection because rejected claims 37

The rejection of claims 16, 27, and 34 under § 102(b) [sic, § 102(e)] over Furukawa is sustained.

The rejection of claims 4, 5, 7, 8, 24, 28, 31, and 35 under § 103(a) over Mae and Veranth is sustained and the rejection of claim 6 under § 103(a) over Mae and Veranth is reversed.

The rejection of claims 22, 23, 26, and 27 under § 103(a) over Mae and Sakai is sustained.[8]

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

LEE E. BARRETT Administrative Patent Judge	)	
JOSEPH L. DIXON Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES

and 38 depend on these claims.

[8] As stated in the subsection "Claims 22?, 23, 26?, and 27" on pages 21-22 of this opinion, claims 22 and 26 are included in the rejection because they are related to claims 23 and 27 and because appellant believes the examiner may have intended to reject claims 22 and 26.

)
)
)
HOWARD B. BLANKENSHIP)
Administrative Patent Judge)

ADAMS & WILKS
50 BROADWAY
31ST FLOOR
NEW YORK, NY 10004